

External SORT

This section provides information on using external SORT programs with Natural. It covers the following topics:

- Support of External SORT
- Special Considerations for OS/390
- Special Considerations for VSE/ESA
- Special Considerations for BS2000/OSD

Natural Execution - Miscellaneous - Other Topics:

Asynchronous Processing | Double-Byte Character Sets | Input/Output Devices | Back-End Program Calling Conventions | Natural 31-Bit Mode Support | LE Subprograms

Support of External SORT

The Natural SORT statement may optionally invoke an external SORT program that carries out the actual sorting. An external SORT program is used if the keyword subparameter EXT of the macro NTSORT is set to ON.

Natural supports all external SORT programs that comply with the SORT interface documented in the relevant IBM manuals (for OS/390, VSE/ESA and CMS) and Siemens manuals (for BS2000/OSD).

The requirements (e.g. space and datasets) are identical to those for the execution of a 3GL (e.g. COBOL, PL/I) application program that invokes the operating system SORT program and can vary according to the external SORT program in use.

The communication with the external SORT program is via the E15 and E35 user-exit routines. As a consequence, Natural does not require the datasets SORTIN and SORTOUT.

Special Considerations for OS/390

All external SORT programs supporting the extended parameter list can be used.

Special Considerations for VSE/ESA

The external SORT program is loaded into the partition program area. For this reason, you must add round about 200 KB additional storage to the size requirements of the Natural batch nucleus specified in the SIZE parameter of the EXEC statement.

Example:

```
// EXEC <natural>,SIZE(<natural>,200K)
```

where <natural> is the name of your Natural phase.

Special Considerations for BS2000/OSD

The external SORT program is called using the level 1 interface. That is, Natural passes all SORT control statements to the external SORT program and dataset SYSDTA is not used for input.

The external SORT program is searched for in the following libraries:

- User TASKLIB concatenated with the BLSLIB chain, if a User TASKLIB was specified,
- System TASKLIB (\$TSOS.TASKLIB) concatenated with the BLSLIB chain.